# SGS

# SGS-CSTC Standards Technical Services Co., Ltd.

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# **RF Exposure Evaluation declaration**

Application No.:	SZEMO100704381RF
Applicant:	Summer Infant,Inc.
Address of Applicant:	582 Great Road, North Smithfield Rhode Island, United States
Factory:	Dongguan Tangxia Cheng De Electronic Factory
Address of Factory:	20, XinGui Rd, Lincun, Tangxia, Dongguan.
FCC ID:	PZK02480
Fundamental Carrier Frequency :	2405MHz to 2475MHz
Equipment Under Test (EUT	):
Product Name:	Baby Monitor
Trade Name:	N/A
Item No.:	02480/02950
Date of Receipt:	2010-07-15

Date of Test:	2010-07-19 to 2010-08-13
Date of Issue:	2010-08-20
Test Result :	PASS*

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Jack Zhang Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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# 2 **RF Exposure Evaluation**

#### 2.1 Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the

environment impact of human exposure to radio frequency (RF) radiation as specified in1.1307(b)

#### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range	Electric Field	Magnetic Field	Power Density	Average Time
(MHz)	Strength (V/m)	Strength (A/m)	(mW/cm2)	(Minutes)
	(A) Limits for	Occupational/ Cont	rol Exposures	
300-1500			F/300	6
1500-100,000			5	6
300-1500			F/1500	6
1500-100,000				300

F= Frequency in MHz

Friis Formula

Friis transmission formula: Pd = (Pout\*G)/(4\*pi\*r2)

Where

 $Pd = power density in mW/cm^{2}$ 

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd id the limit of MPE, 1 mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input

to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

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#### 2.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity:  $18\,^\circ\!\!{\rm C}\,and\,78\,^\prime\!\!{\rm S}$  RH.

#### 2.3 Test Result of RF Exposure Evaluation

Product : Baby Monitor

Test Item : RF Exposure Evaluation

Antenna Gain: 2.5dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.778 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Frequency (MHz)	Max Conducted Peak Output Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )
Highest	2475	12.36	17.219	0.006091

The distance r (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation requirement.